

plan; (10) system transition plan; (11) updated cost benefit analysis and project schedule; and (12) IT product prototype (if applicable).

The third principal step terminates in approval step 114. This step assesses the viability of the project mainly based on the analysis performed in the third principal step. Exemplary authorizing agent(s) for the first principal step include one or more of: (1) technical and business subject matter experts; (2) servicing personnel; (3) developers; (4) database and infrastructure personnel; and (5) any personnel in the organization assigned the role of overseeing changes in the code (e.g., “change management personnel”). If the authorizing agents approve the project, the process 10 proceeds to the next principal step. If the authorizing agents do not approve the project, then the developers may revise or abandon the project.

D. Fourth Principal Step

The foremost purpose of the fourth principal step is to provide a stable and tested IT solution. Other purposes of the fourth principal step are to: (1) ensure that proper coding standards are utilized; (2) detect and eliminate errors in the IT 15 system/service; and (3) ensure acceptance of the IT product by providing adequate servicing of the IT product.

The responsible party for performing the fourth principal step may comprise an appropriate project manager. The second principal step may receive inputs (e.g., 20 information) from any appropriate area of IT (e.g., any appropriate IT subject matter experts).

The fourth principal step may specifically include six substeps. The first (1) substep involves configuring development and user test environments. Configuring a development environment pertains to setting up the equipment, software, tools, 25 passwords, protocols, etc. that may be required to proceed with the development of the IT solution. Similarly, configuring a test environment refers to setting up the equipment, tools, protocols, etc. used to enable the testing of the IT solution. The second (2) substep involves installing the development environment, which involves actually installing any equipment, software, tools, etc. set up in the preceding substep.

30 The third (3) substep involves coding system and batch jobs. This, in turn, may entail: (a) developing a configuration management process (e.g., for establishing

procedures for scheduling and coordinating the coding activities of multiple individuals working on the project); (b) developing an error and exception handling code (e.g., for establishing basic protocols for handling errors and for defining exceptions to the basic protocols); (c) establishing provisions for performing batch

5 jobs required by the IT solution, establishing Job Control Language (JCL) used in the IT solution, and establishing any scheduling-related or calendar-related functions performed by the IT solution; (d) building interfaces to other interrelated systems; (e) establishing conversion tools (e.g., for converting data from a previous IT product to a current IT product); (f) developing (e.g., writing) code for other related systems (e.g.,

10 systems that are interrelated with the current IT product); (g) developing code and/or processes for installing the IT product; (h) establishing monitoring procedures; and (i) generally compiling and constructing the IT product by integrating its various subsystems and components .

The fourth (4) substep involves establishing application testing. This substep may entail establishing tests for various units, modules and systems provided by the IT product. This substep may also entail establishing tests for other functional aspects of the IT product, and for interface features of the IT product.

The fifth (5) substep involves creating system documentation. This substep involves creating documentation with respect to: (a) support processes; (b) system manuals; (c) disaster recovery; and (d) training material and training schedules.

The sixth (6) substep involves establishing a rollout plan. This substep entails defining the procedures that will be used to introduce and install the new IT product (and potentially retire a pre-existing IT product). This substep may involve creating documentation of the rollout procedures.

25 The output of the fourth principal step includes one or more of the following deliverables: (1) the IT product itself (e.g., the system); (2) monitoring procedures; (3) code package; (4) test results; (5) configuration management; (6) installation/back-out documentation and procedures (a back-out procedure defines the steps that should be performed to take the IT product out of service (e.g., by removing code that has been

30 installed); (7) training material; (8) systems manuals; (9) disaster recovery plan; (10) deployment documentation; (11) rollout and implementation plan; and (12) test

scripts.

The fourth principal step terminates in approval step 118. This step assesses the viability of the project mainly based on the analysis performed in the fourth principal step. Exemplary authorizing agent(s) for the fourth principal step include 5 one or more of: (1) business and technical subject matter experts; (2) service personnel; (3) developers; (4) database and infrastructure personnel, etc. If the authorizing agents approve the project, the process proceeds to the next principal step. If the authorizing agents do not approve the project, then the developers may revise or abandon the project.

10 **E. Fifth Principal Step**

The purpose of the fifth principal step is to test the developed solution. Another purpose of this principal step is to ensure that appropriate testing has been performed. Another purpose of this principal step is to establish agreement amongst project participants that the IT product is ready for deployment.

15 The responsible party for performing the fifth principal step may comprise an IT project manager or an appropriate business leader. The fifth principal step may receive inputs (e.g., information) from any appropriate area of IT and business (e.g., any appropriate IT or business-related subject matter expert).

20 The fifth principal step may specifically include six substeps. The first (1) substep involves configuring the test environment, which may include installing the user test environment and performing data conversion for user testing.

The second (2) substep involves configuring the production environment. This step pertains to setting up the software, tools, equipment, etc. to enable testing of the IT solution.

25 The third (3) substep involves performing testing. This may entail tests concerning different aspects of the IT product, including: (a) functional testing; (b) integration testing; (c) systems and data conversion testing; (d) stress testing; (e) acceptance testing (e.g., acceptance by users); (f) installation procedure testing; (g) load testing; (h) fail-over testing (e.g., pertaining to testing of the procedures for 30 handling system failures, and in particular, procedures for switching from a failed system to an up-and-running system); (i) disaster recovery testing; and (j) security